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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
TRUJILLO, JAMES K	
ART UNIT	**PAPER NUMBER**
2116	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/992,446	GILBERT ET AL.	
	Examiner	Art Unit	
	James K. Trujillo	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) *21-25 and 29-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20 and 26-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-20 and 26-28, drawn to apparatus for booting a domain, classified in class 713, subclass 2.

   II. Claims 21-25 and 29-33, drawn to method of booting a domain, classified in class 713, subclass 2.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the method of booting a domain does not require the particular product as claimed in Group I.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Noel Kivlin, Reg. No. 33,929 on 2 December 2004 a provisional election was made without traverse to prosecute the invention of I, claims 1-20 and 26-28. Affirmation of this election must be made by applicant in replying to this Office action. Claims 21-25 and 29-33 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

2. The office acknowledges the receipt of the following and placed of record in the file: Change in Power of Attorney (May include Associate POA) dated 1/27/03, Drawings dated 8/02/04 and Request for Corrected Filing Receipt dated 1/28/02.

3. Claims 1-20 and 26-28 are presented for examination.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claim 1-3, 6-7, 9-12, 14-20 and 27-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Bouchier et al., U.S. Patent 6,725,317.

6. As to claim 1, Bouchier teaches a device, comprising:

a. a first connector (backplane, also known as a center plane, connecting to the fabric, col. 2 lines14-16 and figure 3);

b. a bus bridge (PA 301, col. 7 lines 55-57 and col. 8 line 1-6) coupled to the first connector;

c. a storage controller (bus arbiter 317 is controls data from storage devices 308, 310, 307, and 311, figure 3 and col. 7 lines 62-64) coupled to the bus bridge; and

d. a bootable storage device (PDH flash memory 307, figure 3) connected to the storage controller, wherein the bootable storage device is operable to boot (PDH flash memory contains boot code for booting the OS, col. 9 lines 1-10) a domain in a multiple domain computer system (wherein a partition is a domain of the multiple partition system, col. 2 lines 28-33).

7. As to claim 2, Bouchier taught the device according to claim 1 as described above. Bouchier further teaches an I/O controller (as part of the I/O described in col. 2 lines 1-27 and depicted in figure 3) coupled the storage controller and a network interface (also with PA 301 to connect to the fabric, figure 3 and Bouchier discloses that data is exchanged between memory and networks, col. 2 lines 19-24). Specifically, PA 301 as disclosed by Bouchier connects I/O to the CPUs and memory devices of a domain. Bouchier connects different processors together

through the fabric and exchanges data to networks. Again PA 301 of Bouchier must inherently have an interface for the network, wherein an interface is an electrical boundary between two parts of the system through which information is conveyed.

8. As to claim 6, Bouchier taught the device according to claim 2 as described above. Bouchier further teaches wherein the I/O controller is coupled to the bus bridge (the I/O controller of Bouchier is part the bus bridge PA 301).

9. As to claim 7, Bouchier taught the device according to claim 1 as described above. Bouchier further teaches a storage port coupled to the storage controller (col. 7 lines 62-64). The storage controller of Bouchier read and writes data to the PDH memory therefore it must inherently have a storage port.

10. As to claim 9, Bouchier taught the device according to claim 1 as described above. Bouchier further teaches a memory (PDH memory) coupled to the first connector, wherein the memory is configured to configuration data for the device (wherein boot code is interpreted to be configuration data, col. 9 lines 1-10).

11. As to claims 10-12, 14-20 and 27-28, Bouchier taught the claimed device which is used in a computer system. Therefore, Bouchier also taught the claimed computer system.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouchier in view of Comer, "Computer Networks and Internets".

14. As to claim 4, Bouchier taught the device according to claim 2 as described above. Bouchier must have a network interface in order exchange data between memory and networks through an I/O device having an I/O controller. Bouchier fails to disclose the details of the his network interface and therefore does not explicitly disclose wherein in the network interface ***comprises an Ethernet transceiver*** coupled to the I/O controller.

Comer teaches a device having a network interface (network interface card, section 9.7) comprising an Ethernet transceiver (the transceiver for Ethernet connection, section 9.7). Comer teaches that Ethernet hardware is used to transfer data between computers (section 7.6.2). Comer further teaches that Ethernet provides the advantage of having high bandwidth (first paragraph page 80).

It would have been obvious to one of ordinary skill in the art, having the teachings of Bouchier and Comer before them at the time the invention was made, to implement the network interface of Bouchier to include an Ethernet transceiver taught by Comer, in order to obtain a network connection.

One of ordinary skill in the art would have been motivated to make this combination in order to achieve a high bandwidth for transferring data between computer systems in view of the teachings of Comer.

15. As to claim 5, Bouchier together with Comer taught the device according to claim 4 as described above. Comer further teaches an Ethernet connector coupled to the Ethernet transceiver (BNC connector, section 9.7).

16. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouchier.

17. As to claim 8, Bouchier taught the device according to claim 1 as described above. Bouchier further teaches a primary card including the first connector and the bus bridge (col. 4 lines 41-46, figures 2 and 3). Specifically, Bouchier discloses that the storage controller and the bootable storage devices are all on a single card. The single card of Bouchier contains six different subsystems (figure 3 and corresponding text).

Therefore, Bouchier does not disclose a second connector coupled between the bus bridge and the storage controller and configured as a secondary card including the storage controller and the bootable storage device, wherein the secondary card further comprises a third connector coupled to the second connector, wherein the bus bridge and the storage controller are coupled through the third connector.

The examiner takes official notice of the means and motivation necessary to implement modular system design within a computer system. Modular system design as is known to those of ordinary skill in the art. It is well known in the computer arts to separate coupled subsystems having different functionality onto different modules. Doing so allows replacement of certain components without having to replace all of the components, such as in the case of a failure to a component or an upgrade in a component. This reduces overall costs of maintenance and parts.

Bouchier shows six different subsystems. In Bouchier, three subsystems have functionality with the processors, which include system processors 302, system memory and bus bridge (PA 301). The other three subsystem of Bouchier have functionality to access the

processor dependent hardware 303 using cell microcontroller 304 and storage controller (bus arbiter 317).

It would have been obvious to one of ordinary skill in the art at the time of the invention having the teachings of Bouchier and the knowledge of modular system design at the time of the invention, to modify Bouchier by implementing a second connector coupled between the bus bridge and the storage controller; and configured as a secondary card including the storage controller and bootable storage device and the secondary card further comprising a third connector (necessitated by the second connector) coupled to the second connector, wherein the bus bridge and the storage controller are coupled through the third connector.

As modified, Bouchier would have a primary card with system processors, system memory and the bus bridge. The secondary card of Bouchier would have the cell microcontroller, the processor dependent hardware and the storage controller. One of ordinary skill in the art would have been motivated to make the modification to reduce cost in maintenance and parts.

18. As to claim 13, Bouchier as modified taught the claimed device which is used in a computer system. Therefore, Bouchier also taught the claimed computer system.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,711,244 to Hayon et al. This reference teaches a network interface that includes an Ethernet transceiver.

U.S. Pat. No. 6,378,021 to Okazawa et al. This reference teaches using a center plane to connect a plurality of processors.

U.S. Pat. No. 6,112,271 to Lanus et al. This reference also teaches using a center plane to connect a plurality of processors.

U.S. Pat. No. 6,378,021 to Keisling et al. This reference also teaches a network interface that includes an Ethernet transceiver.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Trujillo whose telephone number is (571) 272-3677. The examiner can normally be reached on M-F (7:30 am - 5:00 pm) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Trujillo
December 7, 2004

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